CHAPTER XIX

Choice of Woods for Bowmaking

By James Duff

IT IS not our intention to mention in these pages any of the dozens of different kinds of wood that have been called into private use for bowmaking; but rather to confine the article to what may be termed standard woods in use by the craft, such as Yew, Lemonwood, Lancewood, Washaba and Osage-Orange; these all having been tried and found suitable for the purpose.

Yew

This wood has long been known as the best of all bow woods, for, given a straight grained stave of suitable length, free from pins and damp-sap, one has the makings of as nearly a perfect bow as it is possible to obtain. The pins can easily be seen as black spots in the wood and the damp-sap as a bluish line just under the white sap, or back, and running its whole length.

Wide, or coarse, grained yew is flabby and lifeless and unfit for bowmaking. It is also

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rather liable to chrysal, or even fracture, without any apparent reason.

Throughout almost the whole of the United States, usually on the hills and mountains, the wood grows in various quantities and qualities, but, unfortunately, it is generally of the shrub and bush variety and useless for the bowyer's purpose. It can be found in tree form on the western ranges of mountains, while in the East, on the Catskill hills, single yews can be seen growing in isolation; not in clumps as in the West. It is said by a well known woodsman, who has travelled the United States all over, that Georgia abounds in yew; and we know that in South America it is rather prolific, and that tons of it are shipped every year to the Swiss carvers, as can be seen in the well known cuckoo clocks. So it would seem that yew is not so scarce a domestic wood as one might imagine.

The Names "Spanish" and "Italian" can be taken in these days to be descriptive of any kind of yew that is of very fine growth, but not to indicate a product of Italy or Spain. It is very doubtful if one would be recompensed today for a tour of the once

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famous yew belt; for example the Apennines were virtually depleted many years ago, so that the *tasso nasso*, or yew, has become almost unknown there.

In selecting the wood, the bowyer will do well to avoid the female tree, if a choice be possible, as, in nearly every case, it will be of inferior grade when made into a bow. It takes nearly twice as much wood to make a bow of a given weight as does the male. A careful examination of the leaves of the tree will show at once if it be female, either by the presence of scarlet berries, or by the marks of where they have been when in seed; characteristics wholly lacking in the male tree.

Bowyers have been taught by experience that it is immaterial whether they cut down the tree in the fall or in the spring, as the result is the same in the finished bow.

The best trees are found on the hills and mountains, where the ground is dry, or where the water washes past the roots and does not lie soaking.

One should mark carefully, before cutting down, the side of the tree which is exposed to the north, as therein lies the best part.

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Lemonwood and Lancewood

A common error among archers is that of confusing lemonwood with lancewood, for, as a matter of fact, they are entirely different. Let us consider the following statement by Mr. C. D. Mell, acting dendrologist to the Office of Forestry, Washington, D. C.

"Lemonwood, botanically known as *Psychetria eckloniana*, a species of *Rubiaceae*, is native to Cape Colony and often grows to the height of 30 feet, and from 2 to 3 feet in diameter. The wood is very hard, tough and useful. Lancewood (Black), so much used for carriage shafts, bows, etc., is botanically known as *Guatteria virgata Dun.* There is, however, a related wood, *Duguetia guitarensis*, native to Cuba and Guiana, which is also called lancewood, and although this is light (yellow) and very elastic, it is seldom used for bows, but is principally imported for the use of coach builders."

Lemonwood is the wood of which perhaps 75% of the bows in use are made. There are several reasons why this kind of bow should hold a high place, chief among them being the fact that several bows may be had for the cost of one of yew. Were it not that

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lemonwood has a tendency to follow the string, or take a set in the drawing direction, it would be considered as good as yew in every respect; but that set is inevitable, and, while it does not detract from the shooting quality of the bow, it certainly does not add to its appearance.

That one need never hesitate to adopt lemonwood bows for shooting because of any supposed inferiority to those of yew, is nowadays generally accepted. We know that nearly all previous records have been broken by archers using them and that some of the most noted archers today use nothing else; getting as good results and as much satisfaction as though indulging in the most expensive yew.

Lancewood, though somewhat similar in appearance to lemonwood, is of a different nature altogether and is much harder to work. As a guide to the buyer it is generally stained a rich, brown color with nitric acid. It has much more spring in it and is more likely to shiver into small pieces, even where the wood does not show a flaw. For target work it ranks low, as it jars the arm too much for accurate work, but it is certainly superior to yew and lemonwood for flight shooting.

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Lancewood can be easily known by looking at the grain, which will be found to be shot, as in beechwood.

Washaba

Washaba is a wood that is native to South Africa, and was but little known, outside of the bowmaking craft, until within recent years. It grows to a great height, often reaching 80 feet, and has been known to show a girth of 9 feet. Unfortunately there are two qualities of Washaba, one that is nearly perfect, straight grained and smooth, and one that is twisted in grain and very coarse. The difference between the two is caused entirely by the conditions of growth. The trees that are exposed to the great gales on the coast of Africa are all wind-twisted, that is, they are distorted in shape while growing and, as a result, become almost useless for bowmaking, the grain of the wood seldom running two inches alike. On the other hand the trees that are sheltered are all straight in grain and make almost ideal bows, especially where one seeks the sharp cast and long distance is desired.

Bows made of this wood are not to be compared to those made of the woods already

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mentioned, because they must be backed to be of any use, the best material for that purpose being straight grained second growth Hickory. They are rather more trying to the bow arm than either Yew or Lemonwood, and are, therefore, not recommended for the fine work of the shorter ranges. For the longer distances they are excellent weapons, inasmuch as the sharper cast allows of a flatter trajectory and, as a result, the shooter has the advantage of a much lower point of aim.

A Washaba bow of 54 pounds weight has been observed by the writer to carry an arrow 200 yards, flying almost flat, which, at the end of that distance, penetrated a steel shield $\frac{1}{16}$ inch thick for four inches, without breaking.

The value of this wood has been recognized within the last few years by the makers in the fishing tackle trade and today most of the best surf casting rods carry a top piece made from Washaba, or Bethabara as it is known to the rod maker. These top pieces are very slender and from six to ten feet in length and are required to carry very heavy game fish. They are also very costly.

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Osage Orange

This wood is native to North America and can be found throughout the United States, although most of it is of the shrub variety. Where it is long enough for the purpose of bow making it is apt to be too crooked to be of much value. However, even though they are not plentiful, yet quite a few good trees may be had, and, as the Osage Orange is not known to be marketed, probably the wood may be had for little or nothing.

If given a piece of Osage Orange that is good enough for the purpose of making a bow, the maker will produce a fairly good weapon, inasmuch as the cast is superior to anything outside of Washaba. Besides, the bow will be found to always retain its shape and the recoil does not take so much out of the bow arm as does that of Washaba, although it is a little greater than in Lemonwood. For this reason it may be called into use as an all round bow for every distance. The weather does not affect this wood as it does the more famous kinds, therefore, when once his point of aim has been secured, the shooter need not fash about the heat or cold, as with yew. This wood may be backed with either Hickory

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or Elm, as it is very tough, but the self bow gives the most satisfaction, if it can be procured.

Bow Woods and the Weather

Of all the woods mentioned above, Yew is most affected by the weather. Sudden changes in the temperature, or in the barometric pressure, may cause well defined alterations in the cast. Yew is also more inclined to tire than other woods, yet, in spite of these drawbacks, the smooth feeling and easiness of draw, the almost unfelt recoil at the loose and the sharpness of cast all make the Yew the most valuable weapon.

Lemonwood tires a little less than Yew but heat and cold affect its cast almost as much.

Lancewood does not tire readily, has a better cast than either Yew or Lemonwood, and, with Osage Orange and Washaba, is not easily affected by the weather.

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